PROJECT PROFILE
Civil | Geotechnical

Dam Safety Review | Design

Long Lake Dam, Halifax, Nova Scotia

Description:

Meco was contracted by the Nova Scotia Department Natural Resources to complete a Dam Safety Review (DSR), Flood Study and prepare an Emergency Preparedness Plan (EPP) in accordance with the Canadian Dam Association (CDA) *Dam Safety Guidelines, 1999* for Long Lake dam, Halifax, Nova Scotia. The Long Lake dam is a puddle core earth fill dam with stone masonry spillway, originally constructed in 1847 for industrial purposes and presently used to form a recreational reservoir for Long Lake Provincial Park.

Meco's scope of work included:

- Classification of the dam & spillway in accordance with the CDA Guidelines
- A site inspection for physical deficiencies
- A review of Operations, Maintenance and Surveillance practices
- Development of a hydrological model for the Long Lake Watershed
- Routing of the Inflow Design Flood (IDF) through system to determine outflow hydrograph
- Dam break modeling and flood inundation mapping using FLDWAV and preparation of an Emergency Preparedness Plan
- Analysis of design and construction
- Preparation of a formal report with findings and recommendations

Comments on Budget/Schedule Difficulties: The client used a selective task strategy to develop the necessary tools to meet their fiduciary requirements. Meco worked with the client to achieve their goal within a prescribed budget.

Responsibility on Project: Meco's engineering participation at Long Lake dam was performed over three years and included three separate contracts for different aspects of the owners due diligence and fiduciary requirements.

Relevance of Project: The project is presented to demonstrate Meco's broad capability to meet all challenges for dam safety engineering.